

جامعة الانبار
كلية العلوم
قسم التقنيات الأحيائية

اسم المادة: المناعة
Lymphocytes: عنوان المحاضرة
الاستاذ المساعد الدكتور صفاء عبد لطيف المعيني

Lymphocyte

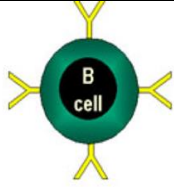
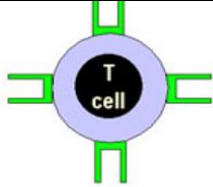
Lymphocyte are mononuclear, nongranular leukocytes of lymphoid tissue, participating in immunity.

They are found in blood, lymph and lymphoid tissues such as spleen, lymph nodes, tonsils, peyer`s patches, appendix etc.... the lymphocytes are two types.

They are

1. B lymphocytes
2. T lymphocytes

Comparison of B lymphocyte and T lymphocyte

property	B cells	T cells
		
Origin	Bone marrow in adult	Bone marrow in adult
Maturation	Lymphoid tissue or bone marrow . Bursa of fabricius in birds	Thymus
Longevity	Short few days to week	Long months to years
Complement	Present	Absent
Receptors surface immunoglobulins	Present	Absent
Proliferation	Proliferate upon antigenic stimulation, differentiate into plasma cells and memory cells	Proliferate upon antigenic stimulation
Type of immunity	Humoral immunity	Cell mediate and humoral immunity
Secretary product	Antibodies	Lymphokines
Distribution	High in spleen, lymph nodes, bone marrow and other lymphoid tissue , low in blood	High in blood, lymph and lymphoid tissue

Types and functions

Memory cell – long lived cells responsible for anamnestic response

Plasma cells – a cell arising from a B cell that manufactures specific antibodies

T cytotoxic cell Tc – lysis cell recognized as non self and parasite infected cells

T helper cell Th – it is necessary for B cells activation by T-dependant antigens and T effectors cell

T regulator cell – it develops into Th or T suppressor cell and control balance between enhancement and suppression of response to antigens

T suppressor cell Ts - it blocks induction and or / activation of Th and B cells. It helps maintain tolerance

T dependant Th cell TD TH cell – it provides protection against infectious agents, mediates inflammation and activates macrophages in delayed type hypersensitivity

Null cell – lymphocytes that lacks surface cell markers

References:-

- 1- Richard Coioco and Geoffery Sunshine (2014). Immunology. Seventh edition. Wiley Blackwell.